

**(b) Program**

The program shall—

(1) support both individual investigators and multidisciplinary teams of investigators;

(2) conduct research in multiple architectures, which may include vector, reconfigurable logic, streaming, processor-in-memory, and multithreading architectures;

(3) conduct research on software for high-end computing systems, including research on algorithms, programming environments, tools, languages, and operating systems for high-end computing systems, in collaboration with architecture development efforts;

(4) provide for sustained access by the research community in the United States to high-end computing systems and to Leadership Systems, including provision of technical support for users of such systems;

(5) support technology transfer to the private sector and others in accordance with applicable law; and

(6) ensure that the high-end computing activities of the Department of Energy are coordinated with relevant activities in industry and with other Federal agencies, including the National Science Foundation, the Defense Advanced Research Projects Agency, the National Nuclear Security Administration, the National Security Agency, the National Institutes of Health, the National Aeronautics and Space Administration, the National Oceanic and Atmospheric Administration, the National Institutes of Standards and Technology, and the Environmental Protection Agency.

**(c) Leadership Systems facilities****(1) In general**

As part of the program carried out under this subchapter, the Secretary shall establish and operate 1 or more Leadership Systems facilities to—

(A) conduct advanced scientific and engineering research and development using Leadership Systems; and

(B) develop potential advancements in high-end computing system hardware and software.

**(2) Administration**

In carrying out this subsection, the Secretary shall provide to Leadership Systems, on a competitive, merit-reviewed basis, access to researchers in United States industry, institutions of higher education, national laboratories, and other Federal agencies.

**(d) High-End Software Development Center****(1) In general**

As part of the program carried out under this subchapter, the Secretary shall establish at least 1 High-End Software Development Center.

**(2) Duties**

A Center shall concentrate efforts to develop, test, maintain, and support optimal algorithms, programming environments, tools, languages, and operating systems for high-end computing systems.

**(3) Proposals**

In soliciting proposals for the Center, the Secretary shall encourage staffing arrange-

ments that include both permanent staff and a rotating staff of researchers from other institutions and industry to assist in coordination of research efforts and promote technology transfer to the private sector.

**(4) Use of expertise**

The Secretary shall use the expertise of a Center to assess research and development in high-end computing system architecture.

**(5) Selection**

The selection of a Center shall be determined by a competitive proposal process administered by the Secretary.

(Pub. L. 108-423, § 3, Nov. 30, 2004, 118 Stat. 2400.)

## REFERENCES IN TEXT

This subchapter, referred to in subsecs. (c)(1) and (d)(1), was in the original “this Act”, meaning Pub. L. 108-423, Nov. 30, 2004, 118 Stat. 2400, which is classified principally to this subchapter. For complete classification of this Act to the Code, see Short Title note set out under section 5501 of this title and Tables.

## CODIFICATION

This section was enacted as part of the Department of Energy High-End Computing Revitalization Act of 2004 which comprises this subchapter, and not as part of the High-Performance Computing Act of 1991 which comprises this chapter.

**§ 5543. Authorization of appropriations**

In addition to amounts otherwise made available for high-end computing, there are authorized to be appropriated to the Secretary to carry out this subchapter—

(1) \$50,000,000 for fiscal year 2005;

(2) \$55,000,000 for fiscal year 2006; and

(3) \$60,000,000 for fiscal year 2007.

(Pub. L. 108-423, § 4, Nov. 30, 2004, 118 Stat. 2402.)

## REFERENCES IN TEXT

This subchapter, referred to in text, was in the original “this Act”, meaning Pub. L. 108-423, Nov. 30, 2004, 118 Stat. 2400, which is classified principally to this subchapter. For complete classification of this Act to the Code, see Short Title note set out under section 5501 of this title and Tables.

## CODIFICATION

This section was enacted as part of the Department of Energy High-End Computing Revitalization Act of 2004 which comprises this subchapter, and not as part of the High-Performance Computing Act of 1991 which comprises this chapter.

**CHAPTER 82—LAND REMOTE SENSING  
POLICY**

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**§ 5601. Findings**

The Congress finds and declares the following:

(1) The continuous collection and utilization of land remote sensing data from space are of major benefit in studying and understanding human impacts on the global environment, in managing the Earth's natural resources, in carrying out national security functions, and in planning and conducting many other activities of scientific, economic, and social importance.

(2) The Federal Government's Landsat system established the United States as the world leader in land remote sensing technology.

(3) The national interest of the United States lies in maintaining international leadership in satellite land remote sensing and in broadly promoting the beneficial use of remote sensing data.

(4) The cost of Landsat data has impeded the use of such data for scientific purposes, such as for global environmental change research, as well as for other public sector applications.

(5) Given the importance of the Landsat program to the United States, urgent actions, including expedited procurement procedures, are required to ensure data continuity.

(6) Full commercialization of the Landsat program cannot be achieved within the foreseeable future, and thus should not serve as the near-term goal of national policy on land remote sensing; however, commercialization of land remote sensing should remain a long-term goal of United States policy.

(7) Despite the success and importance of the Landsat system, funding and organizational uncertainties over the past several years have placed its future in doubt and have jeopardized United States leadership in land remote sensing.

(8) Recognizing the importance of the Landsat program in helping to meet national and

commercial objectives, the President approved, on February 11, 1992, a National Space Policy Directive which was developed by the National Space Council and commits the United States to ensuring the continuity of Landsat coverage into the 21st century.

(9) Because Landsat data are particularly important for national security purposes and global environmental change research, management responsibilities for the program should be transferred from the Department of Commerce to an integrated program management involving the Department of Defense and the National Aeronautics and Space Administration.

(10) Regardless of management responsibilities for the Landsat program, the Nation's broad civilian, national security, commercial, and foreign policy interests in remote sensing will best be served by ensuring that Landsat remains an unclassified program that operates according to the principles of open skies and nondiscriminatory access.

(11) Technological advances aimed at reducing the size and weight of satellite systems hold the potential for dramatic reductions in the cost, and substantial improvements in the capabilities, of future land remote sensing systems, but such technological advances have not been demonstrated for land remote sensing and therefore cannot be relied upon as the sole means of achieving data continuity for the Landsat program.

(12) A technology demonstration program involving advanced remote sensing technologies could serve a vital role in determining the design of a follow-on spacecraft to Landsat 7, while also helping to determine whether such a spacecraft should be funded by the United States Government, by the private sector, or by an international consortium.

(13) To maximize the value of the Landsat program to the American public, unenhanced Landsat 4 through 6 data should be made available, at a minimum, to United States Government agencies, to global environmental change researchers, and to other researchers who are financially supported by the United States Government, at the cost of fulfilling user requests, and unenhanced Landsat 7 data should be made available to all users at the cost of fulfilling user requests.

(14) To stimulate development of the commercial market for unenhanced data and value-added services, the United States Government should adopt a data policy for Landsat 7 which allows competition within the private sector for distribution of unenhanced data and value-added services.

(15) Development of the remote sensing market and the provision of commercial value-added services based on remote sensing data should remain exclusively the function of the private sector.

(16) It is in the best interest of the United States to maintain a permanent, comprehensive Government archive of global Landsat and other land remote sensing data for long-term monitoring and study of the changing global environment.

(Pub. L. 102-555, §2, Oct. 28, 1992, 106 Stat. 4163.)